UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MEMORANDUM

DATE: SEP 30 1999

SUBJECT: **ACTION MEMORANDUM** - Request for a Non-Time Critical CERCLA Removal Action at the Master Metals Site, Cuyahoga County, Cleveland, Ohio

FROM: Gwendolyn S. Massenburg, Remedial Project Manager
Remedial Response Branch, Section 4

TO: William E. Muno, Director
Superfund Division

THRU: Richard Karl, Chief
Emergency Response Branch

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed non-time critical removal action described herein for the Master Metals Incorporated (MMI) site, located in Cuyahoga County, Cleveland, Ohio. The MMI site is a former secondary lead smelter (Master Metals Incorporated) and a nearby residential property (Holmden Avenue) where lead bearing materials were deposited as fill. This action is necessary to abate an imminent and substantial threat to public health and the environment posed by the presence of lead contaminated soils at the Master Metals site. This removal action is recommended so as to expeditiously reduce the actual or potential exposure of nearby human populations to hazardous substances from the site.

The action is expected to result in the removal of lead contaminated soils, exceeding the risk-based standards, present a threat to trespassers and construction workers on the site. The lead contaminated materials will be treated, consolidated and contained on-site under a cap. Due to the availability of at least a six month planning period before site activities must begin, the proposed action will be a non-time critical removal.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID # OHD097613871
Category of removal: Non-Time Critical

A. SITE DESCRIPTION

1. Background

National Lead Industries, Inc. (NL) initially constructed the "facility" in 1932, reportedly on historic slag fill deposited throughout the area during the industrial development in the early 1900's. NL owned and operated the facility as a secondary lead smelter, producing lead alloys from lead-bearing dross and lead scrap materials. NL also engaged in battery cracking as part of its operations. MMI purchased the facility in 1979. MMI thereafter continued to operate the facility as a secondary lead smelter, receiving lead-bearing materials from off-site sources. The lead bearing feed material received by MMI was classified and determined to be a D008 hazardous waste (lead). During its operations, MMI used rotary and pot furnaces to convert these lead-bearing materials into lead ingots. Each furnace utilized by MMI contained a baghouse, and a pollution screening structure that collected particulate matter from the furnace. The collected dust was approximately 60 percent lead. The sludge remaining in the furnace after smelting was classified and determined as K069 hazardous waste (emission control dust/sludge from secondary lead smelting).

By-products from the smelting operation included furnace flux, furnace sludge, slag, dross, and baghouse fines. Excluding the slag, MMI recycled most of the materials back into the furnaces. MMI tested and disposed of the slag off-site. MMI diverted cooling water to the City of Cleveland sewer system. MMI stored finished lead ingots in the roundhouse at the north end of the property prior to shipping off-site.

MMI had a long history of non-compliance with the various state and federal environmental health and safety laws. MMI's history of poor operating practices have been documented with releases of hazardous materials to the environment, including the facility's property. The Ohio Environmental Protection Agency (EPA) shut down the facility in 1993. Throughout 1995 and 1996, vandals and scavengers visited the facility on an intermittent basis. Further, in 1995 or 1996, MMI partially demolished one of the facility structures leaving piles of rubble, girders and sheet metal standing around the structure's remains.

2. Physical Location

The MMI site is located at 2850 West Third Street, Cuyahoga County, Cleveland, Ohio, in the flats area of downtown in an industrialized sector of the city. The property encompasses 4.3 acres and is bordered on two sides east and west by railroad tracks, with a LTV Steel facility located immediately to the east and south. The Cuyahoga River is located approximately 1,500 feet to the east. A playground and athletic field is located approximately 1,500 feet to the west and the nearest residential area begins approximately 2,000 feet to the northwest. The site is fenced and access is limited.

The area surrounding the site meets the Environmental Justice (EJ) criteria employed by the U.S.

EPA Region 5's Superfund Division. For Ohio, the EJ criteria is based upon having a minority population of 26% or greater, or a low income population of 60% or greater. The population located within a mile radius of the site is 98.86% minority, with low income being 97%. The population is 525 for this area, see attachment II.

3. Release or Threatened Release into the Environment of Hazardous Substances or Contaminants

MMI had a long history of non-compliance with various state and federal environmental, health and safety laws, as well as a history of poor operating practices. There are documented releases of hazardous materials to the environment, including the facility property. In December 1990, MMI contracted with a consultant to install and sample ground water monitoring wells on the site and sample and analyze soil at the site. The analyzed results showed groundwater contaminated at levels greater than the Safe Drinking Water Act's 42 U.S.C. §§ 300f-300j-11, maximum contaminant level (MCL) for ground water. The soil on-site contained elevated levels of barium, cadmium, chromium, lead and nickel. One area on-site contained lead in excess of 10,000 parts per million, or 1% lead.

The Ohio EPA installed three ambient air monitors near the facility's property in January 1992. During the first two quarters of 1992, air samples collected from a station immediately downwind of MMI revealed exceedances of the Clean Air Act ,42 U.S.C. §§ 7401-7671q, National Ambient Air Quality Standards (NAAQS) for lead. In April and May 1992, the station recorded four more NAAQS violations.

In July 1992, U.S. EPA contracted with an outside technical assistance team to collect soil samples on and around the facility property to determine if the site contaminants were subject to airborne transport. Analysis of these samples for the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901-6991i, metals, and Toxicity Characteristic Leachate Procedure (TCLP) metals revealed TCLP lead was present in concentrations of 1260mg/kg, more than 200 times greater than the RCRA regulatory level of 5 mg/L, at all sample location points except for one facility and one off-facility location. The concentration of total lead detected in the site soil ranged between 12,000mg/kg to155,000mg/kg, or approximately 1.0% to 15.0% lead.

In August 1992, Ohio EPA ordered an immediate 30-day shutdown of the facility because of MMI's life-threatening violations of the NAAQS for lead exposure. During MMI's shutdown, downwind ambient air monitoring data collected by Ohio EPA registered lead levels in violation of the NAAQS for lead exposure on every day except one. On August 5, 1993, the Ohio EPA Director ordered MMI to cease operating the facility until it could demonstrate compliance. Even with the shutdown of the facility's furnaces, U.S. EPA downwind air monitoring stations routinely detected elevated lead concentrations as much as 500 times greater than the upwind concentrations and 33 times the NAAQS quarterly average. MMI did not commence operation after this shutdown and all permits were withdrawn in March 1995. See attachment V, Ohio EPA, Letter, re: Violations of the October 14, 1992, Final Findings and Orders Issued to Master

Metals, Inc, August 05,1993.

PRC Environmental Management, Inc. (on behalf of the U.S. EPA) performed a Screening Site Inspection (SSI) for the MMI site in June 1994. From the inspection a Site Evaluation Report (SER) was completed also by PRC Environmental Management, Inc., which documented releases to the air, groundwater, surface water and soil migration pathways. Ohio Department of Health determined that releases to the air migration pathway had exposed nearby residents and workers to lead concentrations exceeding applicable NAAQS. The results of the air sampling indicated that the furnace stacks and waste piles containing lead-bearing materials had released lead into the air via wind dispersal. Air samples collected downwind of MMI detected lead particulate emissions which exceeded the NAAQS by as much as 33 times. Analysis of groundwater samples collected on-site revealed lead concentrations as high as 1.35 mg/L and chromium concentrations as high as 1.33 mg/L. The Site Evaluation Report established the probable discharge of untreated wastewater containing lead, copper, chromium, and cadmium to the Cuyahoga River. Soil samples collected on-site revealed lead concentrations ranging from 6,020 to 115,000 mg/kg. The Occupational Safety and Health Administration (OSHA) found MMI employees to have blood lead levels greater than OSHA's limits of 40ug/dl of blood as a result of exposure in the MMI work place, see attachment VIII.

4. NPL Status

Currently, MMI is not listed on the NPL. Based on preliminary scoring under HRS II, this site would be eligible for inclusion on the NPL.

B. Other Actions to Date

1. Previous Actions

Previous actions taken by state and local governments are discussed in Section C-1 of this Action Memo, see State and Local Action to Date.

On April 17, 1997, 53 Potentially Responsible Parties (PRP) agreed to perform a time-critical and non-time-critical removal action at the facility through an administrative order on consent (AOC). This order required the PRPs to perform the following Phase I time critical removal actions:

- Analysis and mapping of waste materials and contamination at the site;

- Long term securing of the site against trespassers through the use of fencing and signs;

- Excavation, demolition, consolidation, and/or removal of highly contaminated buildings, structures, soils, loose waste materials, loose industrial by products, construction materials, demolition debris, machinery, garbage, dusts, post-industrial

debris and office or industrial equipment to reduce the spread or direct contact with contamination;

- Removal of drums, barrels, tanks, or other bulk containers that contain or may contain hazardous substances, pollutants or contaminants to reduce the likelihood of spillage or exposure to humans or the environment;

- Containment, treatment, disposal, or incineration of hazardous materials to reduce the likelihood of human, animal or food chain exposure.

The PRPs performed this work during the time period of June 9, 1997 to January 6, 1998. As part of the Phase II non-time critical removal, the order required the PRPs to develop and submit an Engineering Evaluation/Cost Analysis (EE/CA) to determine the nature and extent of contamination and to develop clean-up alternatives to remediate the site. See attachment IV, Entact, Inc., EE/CA for the Master Metals, Inc. Site, Cleveland, Ohio, November 23, 1998.

The PRPs performed an additional time critical removal action at a residential area on Holmden Avenue which had received lead contaminated fill material from the Master Metals facility. The PRPs sampled the Holmden property in April 1997, and found soil with elevated lead concentrations on the property. U.S. EPA and the PRPs completed negotiations for an administrative order on consent for a time-critical removal at the Holmden Avenue property by the end of October 1997. Approximately 1500 cubic yards of contaminated soil was removed, treated and stockpiled on the MMI site in November 1997. The stockpiled materials from the Holmden Ave. property remain on the site, awaiting ultimate disposal.

During the Phase I time-critical removal conducted from June 1997 through January 1998, the PRPs completed additional field sampling as required by the EE/CA's work plan.

2. Current Actions

After a site visit in November 1998, the U.S. EPA's Remedial Project Manager directed the PRPs to:

- improve site security;

- provide additional hazard signs;

- cover the contaminated soil stockpiled on-site.

The PRPs have:

- upgraded the fencing;

- added hazard signs;

- covered the stockpiled Holmden Ave. materials with polyethylene.

U.S. EPA approved the EE/CA on December 10, 1998, see attachment III. U.S. EPA prepared a Community Involvement Plan in April 1999 and conducted a public meeting on March 18, 1999, for the release of U.S. EPA's proposed plan for the proposed remedy. U.S. EPA held a public comment period from March 1, 1999, through April 30, 1999, pursuant to section 300.820(b) of the National Contingency Plan, 40 C. F. R. Part 300, and considered significant comments. U.S. EPA prepared written responses to the public comments, see attachment IX.

C. State and Local Authorities Role

1. State and Local Action to Date

Beginning in 1980, Northeast Ohio Regional Sewer District (NEORSD) began documenting lead, other heavy metals, and low pH values in the MMI sewer line, in the acid runoff pit, and in the downstream sewer samples. As a result of these findings, Ohio EPA instructed MMI to install an on-site wastewater pretreatment system.

NEORSD records from 1980 to 1982 also indicated that MMI emitted lead to the air at concentrations of up to 215 mg/m^3 and that the facility was discharging lead to the NEORSD system at an average concentration of 48.8 mg/L. High concentrations of cadmium, chromium, copper, zinc, and low pH levels were also detected in the NEORSD wastewater pretreatment system's effluent.

In January 1988, NEORSD sampled water from a combined sewer outfall pipe. NEORSD detected lead in the waste water at a concentration of 0.07 mg/L. In November 1988, NEORSD sampled the sludge in MMI's runoff pit, which contained material generated during MMI's battery cracking operations. Analytical results obtained from the sludge samples revealed elevated concentrations of lead, copper, chromium, and cadmium.

During an unannounced Resource Conservation and Recovery Act (RCRA) inspection in April 1988, Ohio EPA noted uncovered waste piles, battery acid dripping onto the ground, and puddles of liquids with a pH of less than 2.0. In October 1988, the Cleveland Fire Prevention Bureau conducted an unrelated inspection at the MMI facility that revealed many violations, including lack of permits for storing or using hazardous materials and waste labeled improperly.

In January 1992, Ohio EPA installed three ambient air monitoring stations near the MMI site to determine lead concentrations in ambient air to compare the results to the NAAQS quarterly average for lead, which is 1.5 ug/m^3. During the first two quarters of 1992, air samples collected from the station immediately downwind of MMI revealed average concentrations of approximately 38 ug/m^3 and 28 ug/m^3. These quarterly averages exceeded the NAAQS by 2,393 % and 1,707% respectively. In April and May 1992, air monitoring stations at MMI. documented four more NAAQS violations.

In August 1992, the Ohio EPA's air monitoring stations continued to detect high concentrations (12.3ug/m^3) of lead. Ohio EPA ordered MMI to cease all lead smelting operations until it could prove compliance with existing regulations. At the end of August 1992, Ohio EPA permitted MMI to reactivate three pot furnaces, but would not allow MMI to operate its rotary furnaces. In September 1992, Ohio EPA's air monitoring stations located downwind of MMI again detected high concentrations of lead (14.64 ug/m^3).

In October 1992, Ohio EPA directed MMI to install two additional air monitoring stations, one west of the site and one south of the site. Additionally, Ohio EPA directed MMI to:

- install a meteorological station;

- upgrade its battery cracking operations;

- conduct additional soil sampling;

- maintain zero visible emissions;

- initiate a dust suppression program.

In response to this last directive, MMI installed a corrugated fence approximately 10 feet tall along the eastern property line in an attempt to reduce concentrations of lead migrating via air. At this time, Ohio EPA permitted MMI to resume operation of one rotary furnace.

On numerous occasions between December 1992 and April 1993, MMI failed to maintain zero visible emissions, as stipulated by Ohio EPA in October 1992. Because of continuing NAAQS air violations at the MMI site, the Cleveland Division of Air Pollution Control forced MMI to cease all operations in August 1993. See attachment V, Letter, re: Violations of the October 14, 1992, Final Findings and Orders Issued to Master Metals, Inc., Ohio EPA, August 05, 1993.

2. Ohio EPA support during removal.

The Ohio EPA Northeast District Office located in Twinsburg, Ohio, participated extensively during the removal activities at the site, and in reviewing all documents including the EE/CA. Ohio EPA's involvement included providing comments on all draft deliverables, site visits, and participating in numerous conference calls to discuss technical issues related to the site. This also included active participation in the March 18,1999, public meeting for the proposed remedy, and participation in the preparation of a collaborative response to the public comments.

3. Potential of Continued State/Local Response

Ohio EPA is expected to continue to assist the U. S. EPA in the pursuit of response actions proposed herein as well as any further action deemed necessary at the site. An Ohio EPA project

coordinator will continue involvement with this site until completion.

III. THREAT TO PUBLIC HEALTH OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

US EPA's Risk Assessor prepared a streamline risk evaluation to develop an appropriate clean-up or Risk Based Remediation Goal (RBRG), for the residual lead contamination remaining in the soils at the MMI site. U.S. EPA used the assessment to determine what level of residual lead will require additional clean-up action to protect human health at the site. Residual lead contamination in soils greater than or equal to the RBRG (1000mg/kg) for soil lead levels require remedial action to protect human health.

A typical exposure pathway analysis focused on the risk to individuals most likely to come into contact with the contaminated soil. The MMI site is in a heavily industrialized area with little or no foot traffic and therefore exposure to sensitive populations or passersby is extremely low. The typical receptors include the full-time facility worker and the full time construction worker.

Inhalation of lead in air and ingestion of lead by incidental exposure are the most prevalent exposure "pathways." Exposures to lead in air could be site related, because sources of lead still exist both in on-site deteriorated sections of concrete and the perimeter surface soils. Therefore, windblown transmission of these materials potentially complete this pathway. Due to the surface soil located around the perimeter of the site, incidental soil ingestion through routine working activities makes this a potential complete pathway as well.

U.S. EPA does not consider the groundwater ingestion exposure pathway to be a concern, because the City draws exclusively on Lake Erie for drinking water and there are no down gradient receptors. Therefore, ingestion of groundwater is not a relevant pathway. In addition, no pathway exists for contaminated soil discharge to surface waters. U.S. EPA does not consider dermal absorption to be a significant exposure pathway since lead is very poorly absorbed through the skin.

A. Threats to Public Health or Welfare

As indicated by the results of the streamlined risk evaluation, the Master Metals site poses a potential risk to human health due to the residual concentration of lead remaining in the soil. Residual lead contamination in soils greater than or equal to the remediation goal of 1000mg/kg require remedial action to protect both the on-site construction worker and the on-site industrial worker. U.S. EPA developed the remediation goal value with the probability values no greater than 5% to ensure blood lead levels in a developing fetus would not exceed 10ug/dl. Given the range of soil ingestion input values, U.S. EPA will use the average of 1000mg/kg as a reasonable cleanup goal. The time-critical removal action has minimized lead exposure conditions in localized areas of the site, but there are areas where lead impacted soils are present at concentrations which exceed 1000mg/kg, with levels as high as 36,000mg/kg. As such, the site

poses an imminent and substantial threat to public health and welfare, based upon factors set forth in the National Contingency Plan, at 40 C. F. R. §300.415(b)(2), see attachment VI.

B. Threats to the Environment

The MMI site is located in a heavily industrialized area on the "flats"of the Cuyahoga River. It is bordered on two sides by multiple railroad tracks, with a LTV Steel facility located immediately to the east and south. Concrete foundations and pads cover approximately 90% of the surface of the property. Vegetation, consisting solely of small trees, brush and weeds is present around and outside the perimeter fences. Due to the industrial nature of the site there is little if any impact from contaminated soils on any ecologically suitable habitat.

IV. ENDANGERMENT DETERMINATION

Given the site conditions, the nature of the hazardous substances, and potential human exposure pathways identified in the streamlined risk evaluation, the site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health or welfare.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

Based on the remedial objectives established in the EE/CA, U. S. EPA identified and analyzed four removal action alternatives. The alternatives emphasized perimeter excavation of surface contamination and "cap and containment" integrity to focus on eliminating inhalation and ingestion exposure pathways. These alternatives included a "no action alternative" for baseline comparison. Subsequently, U. S. EPA evaluated each alternative for effectiveness, implementability and cost.

A. Proposed Action Description

The response action selected to mitigate threats associated with the site consists of the following tasks:

- Excavate off-site perimeter contaminated soils.

- Consolidate contaminated soils on-site.

- Cover the contaminated areas with two feet of clean fill and revegetate.

- Operate and maintain the cover for thirty years.

- Obtain deed restrictions to minimize potential exposure to contaminated soil.

Off-site perimeter contaminated soils will be excavated to 1,000 mg/kg or until the original historical slag fill deposited in this area in the 1900s is encountered. The material will be tested to determine if treatment is required prior to consolidation on site. Any hazardous waste generated will be treated below land disposal requirements. Off-site perimeter excavation of contamination will require clearing, grubbing, removal and replacement of the entire site fencing.

The off-site perimeter areas will extend outward from the eastern, western, and southern boundary lines of MMI. The off-site perimeter areas will extend outward as follows: the eastern and southern off-site perimeter areas extend from the property lines and end at the existing concrete curb of West Third Street; the western off-site perimeter area will extend outward from the property line and end where there is visual evidence of the manufacturing operations between the MMI facility and the eastern edge of the adjoining railroad spur. The off-site perimeter excavated areas will be back filled with clean soil and revegetated. Care will be taken to ensure proper drainage to eliminate any run-off onto, or from, the MMI property.

On-site, all areas excavated or subgraded will be backfilled to grade. A geotextile membrane will be placed between the contaminated material and the clean fill to prevent mixing of the materials. All excavated off-site perimeter materials will be consolidated on-site. All contaminated areas will then be covered with two feet of clean fill and revegetated. Two feet of cover will be placed over those areas where consolidated material is located on site. Only the most severely deteriorated portions of the property will encompass the cover system.

Prior to the start of any of these activities, the following plans will have to be developed and approved by the U.S. EPA:

- Site health and safety plan, including but not limited to, air monitoring and dust control procedures;

- Site security plan;

- Remedial design plan;

- Site sampling plan for confirmation sampling for the Toxic Compound List/Toxic Analyte List (TCL/TAL) and Toxicity Characteristic Leaching Procedures (TCLP) parameters;.

- Treatability Study Work plan for solidification method if on-site solidification is to be performed for TCLP wastes.

All areas which have been subject to excavation shall be filled, graded, and/or revegetated ensuring these areas are replaced to their original condition, and to the extent practical.

B. Estimated Costs

The estimated costs for this non-time critical removal action are summarized as follows:

Direct Capital Costs	$467,440
Indirect Capital Costs	$60,000
Operation & Maintenance	$9,600
Total Costs	$537,040

C. Applicable or Relevant and Appropriate Requirements (ARARs)

All applicable or relevant and appropriate requirements (ARARS) of Federal law will be complied with to the extent practicable. In order for the excavated perimeter soil not to be considered "hazardous waste" as defined in the Ohio Administrative Code 3745-51-03, the PRPs are required to treat the MMI excavated perimeter soil to below the Toxic Characteristic Leaching Procedure. Treatment should be performed in tanks and containers as required by the Ohio EPA's Division of Hazardous Waste Management.

The Ohio ARARs classify the treated soils from the Holmden Ave. property as "awaiting ultimate disposal", and stockpiled on the MMI property as solid waste. The PRPs are required to obtain an exemption from the Ohio EPA's Director, under the Ohio Revised Code 3734.02(G), to consolidate the soil from the Holmden Ave. area with the excavated perimeter soils to be placed under the cap as part of the proposed remedy.

U.S. EPA will send the State of Ohio an invitation to attend negotiations between U.S. EPA and the PRPs when U.S. EPA mails the PRPs the draft administrative order on consent to conduct the non-time critical removal at this site.

VI. CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED

Delayed action or inaction may result in an increased likelihood of ingestion and inhalation threat to human populations working at or near the site.

VII. OUTSTANDING POLICY ISSUES

Development of the soil lead cleanup level is consistent with other lead sites and the biokinetic uptake model using the latest U.S. EPA guidance.

U. S. EPA did not base this Action Memorandum decision on any samples analyzed in U. S. EPA's laboratories.

VIII. ENFORCEMENT

A total of 53 PRPs entered into an administrative order on consent under Section 106 of

CERCLA to perform a time-critical removal action; an initial non-time-critical removal action; and the Engineering Evaluation/Cost Analysis (EE/CA). This order included the demolition and removal of the former Master Metals facility and all waste material associated with the operation.

U.S. EPA will now provide the PRPs the opportunity to enter into an administrative order on consent to complete this non-time critical removal action.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Master Metals site, in Cleveland, Ohio, developed in accordance with CERCLA, as amended by SARA, and is not inconsistent with the National Contingency Plan, 40 C. F. R. Part 300. This decision is based upon the Administrative Record for this site. Conditions at the site meet the National Contingency Plan's criteria for a removal action, 40 C. F. R .§ 300.415(b)(2), and I recommend your approval of the proposed removal action.

Approve: Wm. E. Muno 9/30/99

William E. Muno, Director — Date
Superfund Division

Disapprove: _____ _____

William E. Muno, Director — Date
Superfund Division

Attachments:

I. Site Location Figure

II. U. S. EPA, Region V's, Superfund Environmental Justice Analysis Map for Master Metals Inc., Cleveland Ohio, August 19, 1999.

III. U. S. EPA, Letter, Subject: Master Metals Inc., Approval of EE/CA, December 10, 1998.

IV Entact, Inc., EE/CA for the Master Metals, Inc. Site, Cleveland, Ohio, November 23, 1998.

V. Ohio EPA, Letter, re: Violations of the October 14, 1992, Final Findings and Orders Issued to Master Metals, Inc., August 05, 1993.

VI. U. S. EPA, Memorandum, re: Lead Risk Evaluation for the Master Metals Inc., April 02, 1997.

VII. Ohio EPA, Letter, re: Approval of Urban Setting Designation, " Industrial Valley Area" within the City of Cleveland (ID:98USD013), Cuyahoga County, Ohio, July 29, 1999.

VIII. Ohio Department of Health Letter, re: Ambient Lead Concentrations near Master Metals Site, May 10, 1993.

IX. Public Comments received during public comment period, April 29, 1999

X. Responsive Summary

XI. Administrative Record Index

cc: Sheila Abraham, Ohio EPA/DERR
Bri Bill, U.S. EPA, OPA
Mike Chezik, U.S. DOI
Richard Karl, ERB
Tim Kern, Ohio, AGO
William Messenger, U.S. EPA, EESS
Kris Vezner, U.S. EPA, ORC

ATTACHMENT I

SITE LOCATION FIGURE

SOURCE: OFFICAL STREET ATLAS OF
CLEVELAND 1992-1993 EDITION
FROM COMMERCIAL SURVEY COMPANY

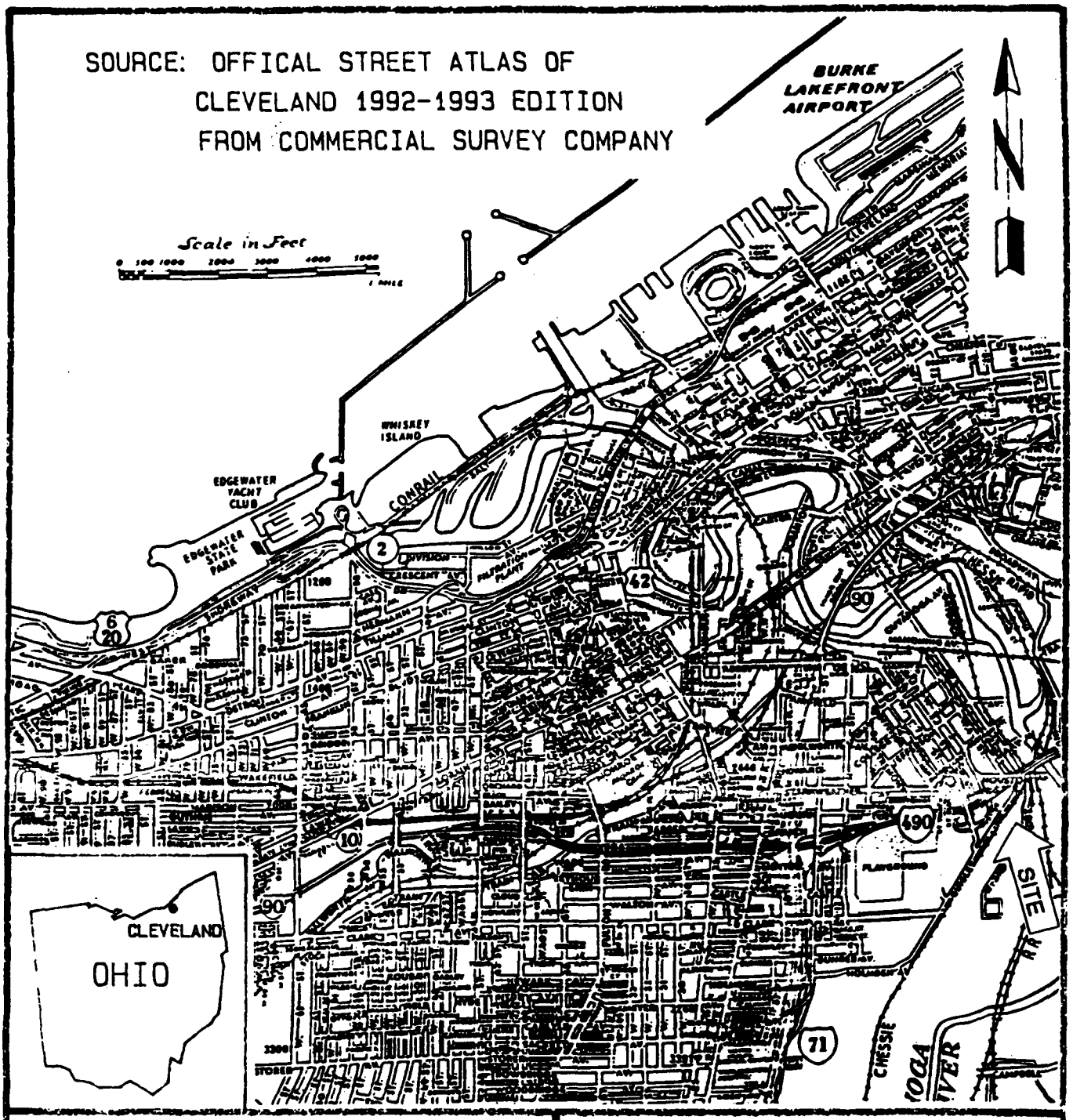

FIGURE 1

SITE LOCATION MAP

MASTER METALS INC.

CLEVELAND, OHIO

ecology & environment

DRAWN BY P. LIU	DATE 07/16/92	PAN# EOH0969SAA
APPROVED BY S. L. BASHAM	DATE 07/16/92	TDD # T05-9206-022

THE FOLLOWING ATTACHMENTS
HAVE NOT BEEN COPIED FOR PHYSICAL INCLUSION
INTO THE ACTION MEMORANDUM.

THE DOCUMENTS CAN BE FOUND IN THE ORIGINAL
ADMINISTRATIVE RECORD UNDER THE FOLLOWING
DOCUMENT NUMBERS:

ATTACHMENT II - SEE DOCUMENT #71

ATTACHMENT III - SEE DOCUMENT #54 (PAGE 2)

ATTACHMENT IV - SEE DOCUMENT #54

ATTACHMENT V - SEE DOCUMENT #10

ATTACHMENT VI - SEE DOCUMENT #16

ATTACHMENT VII - SEE DOCUMENT #70

ATTACHMENT VIII - SEE DOCUMENT #8

ATTACHMENT IX - SEE DOCUMENT #67

ATTACHMENT X

RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY

This Responsiveness Summary addresses concerns expressed by the public regarding U.S. EPA's proposed remedy for the Master Metals Inc. Site (non-time critical removal phase).

Community Relations Background

U.S. EPA held a public comment period on the Master Metals proposed cleanup plan from March 1, 1999 through March 31, 1999. In response to a request from a member of the public to extend the public comment period, U.S. EPA extended the public comment period to April 30, 1999. Various agencies participated in a public meeting to present the proposed cleanup held on March 18, 1999, at the Pilgrim Congregational Church in Cleveland.

U.S. EPA received written comments from six people during the comment period. Five persons provided comments during the public comment portion of the public meeting. U.S. EPA included the written comments and an official transcript of the public meeting in the Administrative Record for the Master Metals site and in the site's information repository at the Jefferson Branch of the Cleveland Public Library, see attachment XI.

This responsiveness summary addresses these comments. Each response is divided into two portions, the comment and a response to the comment. Similar comments are grouped together and are responded to only once. The comments are discussed in no particular order.

WRITTEN COMMENTS FROM THE CITY OF CLEVELAND

COMMENT #1: PERIMETER CONTAMINATED SOILS ARE BEING RECONSOLIDATED ON SITE

> *(A) The delineation of perimeter soils to be remediated is inadequate. Alternative # 2 proposes to remediate off-site areas extending outward from the eastern and southern property lines to the existing concrete curb of West Third Street; from the western property line to where there is visual evidence of the divide between the manufacturing operations of Master Metals and the eastern edge of the adjoining railroad spur. The City of Cleveland's Health Department recently took soil core samples of locations outside the boundaries of the off-site areas proposed to be remediated in Alternative # 2, and found lead levels well in excess of the 1,000 ppm cleanup level which the U.S. EPA has established for this site. In particular, samples taken near the eastern curb of West Third east of the site and samples taken near the southern curb of West Third south of the site, indicated lead levels as high as 15,000 to 35,000 ppm. (See enclosed map of sample locations and corresponding lead levels which was prepared by the Department of Health, Division of Environment, and marked as "Exhibit A").*
>
> **Attachment X**

The City is concerned that the proposed off-site remediation is not extensive enough to encompass all areas which contain lead contamination at levels which pose a threat to human health and the environment. The City feels strongly that the U.S. EPA should require the PRP group to extend the boundaries of the off-site areas to be remediated

RESPONSE:

(I) Alternative #2 in the Proposed Plan proposes to remediate on-site areas, defined by 40 C.F.R. 300.400(e) as the "areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for the implementation of the response action." On-site areas include property owned by MMI as well areas in very close proximity (outside the fence line) to MMI..

(ii) In addition, Alternative #2 proposes to remediate several "off-property" areas as well. The off-property perimeter areas extend outward from the eastern, western, and southern boundary lines of MMI: the eastern and southern off-property perimeter areas extend from the property lines and end at the existing concrete curb of West Third Street; the western off-property perimeter area will extend outward from the property line and end where there is visual evidence of the manufacturing operations between the MMI facility and the eastern edge of the adjoining railroad spur. The off-property perimeter excavated areas will be back filled with clean soil and revegetated. Care will be taken to ensure proper drainage to eliminate any run-off onto, or from, the MMI property.

(iii) The western curb of the West 3rd Street area denoted on the City's map as having high lead levels is within the area already proposed for remediation in the Proposed Plan.

(iv) The areas on the map labeled 2150 and 31300 (units not provided) are within the areas to be remediated.

(v) The eastern curb of West 3rd Street, the other area identified in the City of Cleveland's map as having high lead levels, is in the immediate vicinity of the railroad tracks (LTV Steel property). These areas will not be remediated because it is not possible to link lead found in the railroad track area to operations at the Master Metals facility. The Environmental Evaluation/Cost Analysis (EE/CA) Report explains further that:

- railroad beds have historically been associated with lead and other heavy metal contamination;

- contamination commingling from both past and present industrialized use in this area is possible present;

- the lead that exists in the vicinity of railroad tracks could not be exclusively associated with Master Metals.

(B) Perimeter contaminated soil is being reconsolidated on site. The City opposes this method of disposing of the off-site contaminated soil. The levels of lead contamination in this soil has been measured as high as 24,000 to 43,000 ppm. Reconsolidation on-site increases the volume of contaminated materials on-site and, thus, the overall toxicity, mobility, and volume of contamination at the site. Two of the goals of remediation under the National Contingency Plan (40 CFR 300.430 et seq.) is to minimize untreated waste, and to reduce toxicity, mobility, and volume of contaminants on site. The City is not persuaded by the U.S. EPA's explanation that reconsolidation on-site actually reduces the risk to public health.

The City is particularly concerned that the perimeter material to be deposited on-site may constitute hazardous waste. We agree with the Ohio EPA's comments of May 29, 1998, which state that Superfund Sites should not become collection points for additional waste because they are already contaminated. (Ohio EPA comments, page 4) The City will not accept the creation of a hazardous waste landfill within its municipal boundaries.

Contaminated materials excavated during the Phase I Time Critical Removal were treated and disposed of as "special waste" off-site. The levels of lead-contamination in the Phase I soil turned out to be generally lower than the levels of the off-site perimeter soil. Therefore, off-site disposal may be more justified for the perimeter soil than it was for the Phase I excavated soil.

Finally, the City is unaware of any other sites within the City where a cleanup has been authorized involving a reconsolidation on site of off-site contaminated soils. We do not condone setting such a precedence with this site.

Without waiving the City's objection to the reconsolidating of off-site soil on site, in the event the U.S. EPA ultimately approves Alternative # 2 in its present configuration, the City would recommend that all off-site materials be confined to limited and out-of-the-way areas of the site which are not likely to encounter heavy traffic in the event the site is redeveloped. The City opposes the mounding of off-site consolidated soils on site, since mounding would create surface water run-off problems, and would limit the future utility of the site. The City requests that topographical maps be created showing present site conditions, and the proposed filling activities. All filling operations must comply with City of Cleveland Codified Ordinances, Chapter 561, Landfills (a copy of this Chapter is enclosed and marked as "Exhibit B").

RESPONSE:

(I) Because of the way the site is defined (i.e., it includes "off-property" soils along the perimeter and Holden Avenue), reconsolidating of the off-property (fence-line) areas contiguous with the Master Metals property will not increase the volume of contaminated material on-site. In addition, reconsolidating will reduce the overall mobility of contaminants because the off-

property contaminated soil that tests hazardous will be treated to the land disposal restriction levels prior to being consolidated. Finally, consolidation will reduce contaminant toxicity because the off-property contaminated soil will be consolidated under a cap, removing the risk to any potential on-property or off-property receptor populations. This proposed plan is, therefore, in conformity with the National Contingency Plan (NCP), 40 C.F.R. Part 300.

(ii) In reference to the comment concerning a hazardous waste landfill is being created within the municipal boundaries of the City, this is not an accurate characterization. Uncontrolled hazardous waste will be remediated and contained in order to eliminate exposure to the environment in order to protect human health and the environment. As stated above, all hazardous waste generated in the course of the remedial activities will be treated to the land disposal restriction levels.

(iii) The City's assertion that levels of lead-contamination in Phase I soils were lower than levels of off-site perimeter soils is incorrect. The total lead levels associated with Phase I Time Critical Removal (TCR) Action ranged from 12,000 mg/kg to 155,000 mg/kg (April 1998 Phase 1 Time Critical Report). This non-time critical removal is designed, based on available data, to address total lead levels of down to 36,000 mg/kg (November 1998 EE/CA Report).

(iv) In reference to the City's query on reconsolidating of "off-site" soil "on-site," as stated previously, the proposed activities at Master Metals are all on-site. Soils are proposed to be moved from one part of the site to another to allow for efficient containment. On-site reconsolidating is a mechanism that has been used at other sites, under the appropriate regulatory authorities. Consolidation and "in-place" treatment of hazardous waste within an area of concern is permissible under U.S. EPA's "Area of Contamination Policy." Reconsolidating of solid waste within the limits of waste placement or area of contamination has been conducted at other sites in keeping with Ohio EPA's Division of Solid and Infectious Waste Management's "Reconsolidating of Solid Waste at Closed Sites" guidance. To obtain additional information on the specific sites in the Cleveland area where this have occurred, submit a written request to the Public Information Specialist, Ohio EPA Northeast District Office, 2110 E. Aurora Road, Twinsburg, Ohio 44087.

(v) Regarding the City's comments on the consolidation of contaminated soil in the context of the future use of the site, the U.S. EPA will welcome working with the City of Cleveland or any other prospective user during the development of the remedial design plan to factor in specific constructive suggestions or to accommodate any future redevelopment provided this does not compromise the protection of human health and the environment. Also, U.S. EPA have, in the past, provided regular updates on the progress of the site and have received input from the Cleveland Toxic Sweep Task Force of which the City is an active member.

(vi) The city's comments about mounding and topographical maps will be addressed during the remedial design phase. In regards to the codified ordinance requirement for filling operations. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) 40 C.F.R.

§§300.400(D)(e) Permit requirements. (1) No federal, state or local permits are required for on-site response actions conducted pursuant to CERCLA sections 104, 106, 120, 121, or 122.

© *Alternative treatment methods have not been considered. Alternative # 2 does not consider the treatment of off-site reconsolidated soils through bio remediation or other methods, as a possible substitute for capping and, potentially, for the requirement of deed restrictions. The National Contingency Plan (40 C.F.R. 300.430 et seq.) provides that treatment should be utilized to address the principal threats posed by a site wherever practicable. Innovative technology should be considered when such technology offers the potential for comparable or superior treatment performance or implementability than other demonstrated technologies, such as capping, or the use of institutional controls, such as deed restrictions. The National Contingency Plan (the "NCP") further encourages the development of remediation alternatives which considers treatment methods that reduce the toxicity, mobility, or volume of hazardous substances or contaminants thus eliminating or minimizing the need for long-term management.*

The City understands that there are technologies available that may be able to accomplish this result, and the City opposes the approval of Alternative # 2 in its present form without a thorough evaluation of the alternatives. This comports with the expectations of the National Contingency Plan (40 C.F.R. 300.430 (a) (I) (D) which states that, "the use of institutional controls shall not substitute for active response measures, (e.g. treatment and/or containment of source material.....) as the sole remedy unless such active measures are determined not to be practicable, based on the balancing of trade-offs among alternatives that is conducted during the selection of remedy."

RESPONSE:
(I) The U.S. EPA is unaware of proven bioremediation technologies that address lead contamination, or has any person at any time presented information to the agencies regarding other approved remediation.

(ii) U.S. EPA evaluated remediation options to treat heavy metals, contaminated feedstock, and soils at the Master Metals site, as part of the time critical removal process. U.S. EPA based the stabilization/solidification process chosen for the site on a September 1997 treatability study that demonstrated reduction of the leachability of lead, cadmium and arsenic to non-hazardous levels. U.S. EPA proposed this treatment process as part of Alternative #2, to reduce the mobility and toxicity of off-property lead contaminated soil. Due to the nature of the site (including high lead levels compared with slag depth), U.S. EPA incorporated such technologies along with other risk reduction options such as capping and potential deed restrictions to achieve the agencies' goal of protecting human health and the environment at this site.

COMMENT # 2: THE PRPs HAVE NOT PROPOSED TO REMEDIATE THE UNDERLYING CONTAMINATED SLAG

The dubious and sloppy methods of operation of the Master Metals facility from 1979 to 1993, (16 years) surely contributed significantly to the contamination levels in the slag underlying the cement area on the property. Recognizing the fact that this underlying slag contained some historical contamination, the PRP's should, nevertheless, be made accountable to some extent for the present contaminated condition of this material. The City recognizes that the cost of digging out and remediating the contaminated slag may be extremely costly. There has been little evident consideration, however, of other potentially less costly treatment alternatives that may be effective to stabilize or reduce the toxicity of the underlying slag so as to eliminate the requirement for deed restrictions (see discussion in Objection # 1 C above). Remediation of the underlying material would increase the chances for future redevelopment of the site, which is of great concern to the City, since treatment may eliminate the need for deed restrictions.

RESPONSE:

(I) The City's request that the PRPs should be held accountable "to some extent" for remediation of underlying (historic) slag appears reasonable. However, given the long history of secondary lead smelting operations, in some form, at the Master Metals Site from 1933 to 1993, the agencies have difficulty separating the contamination from previous sources such as the historic slag which is unrelated to Master Metals.

(ii) For information on the general treatment and remediation alternatives for lead contaminated soil, refer to previous response. If the City has specific information on "potentially less costly treatment alternatives to stabilize or reduce the toxicity of the underlying slag", the City should provide this information to the agencies for evaluation.

(iii) Because the slag will not be remediated, a deed restriction would be necessary regardless of whether the contaminated soils were treated and removed off-site or not. At a minimum, a deed restriction would be necessary to limit exposure to contaminated materials in the slag. In addition, unless the site was to be remediated to unrestricted (residential) land use levels, a deed restriction would likely be required as part of the decision for the site (i.e., a deed restriction is required even for a commercial/industrial site).

COMMENT #3: PROPOSED DEED RESTRICTIONS PROHIBITING SUBTERRANEAN DIGGING MAY PREVENT FUTURE REDEVELOPMENT

The U.S. EPA has stated that it is not legally permitted, under the National Contingency Plan, to consider redevelopment of the site as a factor in its evaluation of the EE/CA. The City maintains, however, that reuse of the site cannot be ignored in fashioning the appropriate remedy for this site, since it would be inconsistent with the goals of the National Contingency Plan for a Superfund site to obtain closure when the only foreseeable future use of the site is as a vacant landfill virtually unusable for any purpose. The National Contingency Plan says that institutional controls should not be a substitute for active response measures. In this case, the U.S. EPA is stopping short of its

responsibilities under the NCP by relying on deed restrictions in conjunction with capping as the sole viable alternative for remediation at this site.

The deed restrictions proposed will place enormous burdens on the ability to place any underground utilities or structures on the site. Permission from the U.S. EPA to disturb the cap after site closure will be very difficult to obtain, and it is unreasonable for the U.S. EPA to require that a work plan for subterranean site development be established now. It is very unlikely that a prospective buyer would be able to overcome all the practical and legal obstacles involved in evaluating whether to acquire the Master Metals Superfund Site before remediation is complete, particularly under the circumstances of this site (i.e. the property is in foreclosure for back taxes, and ownership of the property cannot easily be determined).

The City adamantly supports a solution to the contamination problems at this site that not only abates the risks to human health and the environment, but also returns the property to the community as a productive, developable site. The City believes that the U.S. EPA has the leverage to negotiate such a solution with the PRP group, and urges it to do so.

RESPONSE:
(I) In addition to the use of deed restrictions alternative #2 incorporates what is commonly referred to as "active response measures" such as treatment an containment. Deed restrictions and the Ohio Administrative Code 3745.02(H) authorizations are commonly utilized at other hazardous waste sites in the State of Ohio to protect human health and the environment in the event of redevelopment.

(ii) U. S. EPA has not ignored reuse of the site. However, as the City stated, reuse may be problematic and may occur well into the future, given that the property is in foreclosure and ownership is unclear. The agencies are focusing on the primary mandate of remediating the site such that human health and the environment are protected. If and when ownership issues are clarified and the site is being considered for redevelopment, the prospective buyer can utilize mechanisms such as "prospective purchaser agreements" and the "Superfund Redevelopment Initiative," which have been used at other hazardous waste sites to facilitate reuse. Alternatively, reuse of the site for facilities that may not involve extensive subterranean construction is a possibility that City and interested parties may evaluate. In the interim, the City has the option of offering specific constructive suggestions, such as identifying utilities corridors, to be incorporated into the remedial design plan, to facilitate future reuse. MMI was operable at one time, and this site can be operable again given the right conditions, or a facility that can be built on top of a slab.

COMMENT #4: ALTERNATIVE #2 OF THE EE/CA REQUIRES AN OPERATION AND MAINTENANCE (O&M) AGREEMENT FOR A PROPOSED 30-YEAR PERIOD OF TIME.

The best alternative for site remediation would be to require a closure that removes all contamination from site, and thus, does not involve limitations on excavation and does not require an Operation and Maintenance Agreement (O & M Agreement). In the event the U.S. EPA does approve a remediation alternative that includes an O & M Agreement, the City questions whether the 30 year O & M Agreement being proposed provides adequate long-term protection for the site. Under the NCP, long-term and permanent protections afforded by a remediation alternative must be considered in evaluating the appropriate remedy (40 C.F.R. 300.430 (e) (9) (iii) (C). The City believes that the effectiveness of a capping system during and beyond the 30 year time period has not been adequately addressed by Alternative # 2.

After the expiration of the 30 year period, it is not clear what environmental liabilities and health risks the community and potential future users of the site would be facing. More importantly, the 30 year O & M Agreement only provides a band-aid solution to a long term and permanent problem that will continue to exist indefinitely if the lead-contaminated slag is allowed to remain on site and the perimeter soil is placed on the site, since the levels of lead contamination will not degrade or dissipate with time. It is for these reasons that the City believes that the best solution is to require a remediation alternative that will not require an O & M Agreement.

Without waiving its objection to the O & M requirement, the City would like to see additional safeguards required of the PRPs in the O & M Agreement. In particular, the City would like to see a requirement that periodic soil sampling and analysis be required to ensure the cap is effective in keeping the contaminated soil and slag underneath from being exposed at the surface. In addition, a specific cap maintenance plan should be required setting up a schedule for basic activities such as grass-cutting, re-planting of cover vegetation in the event of erosion, debris monitoring and cleanup. The City also questions why a longer time period than 30 years cannot be negotiated with the PRP group. At the end of the O & M period, the City would like a requirement that soil samples be taken and analyzed, and evaluated under then-current standards to determine whether the levels of lead and other contaminants exceed regulatory standards and warrant further cleanup. It is possible that in the future, science will have determined that the levels of lead on site are more hazardous to human health and the environment than is currently known.

In addition, the City questions the valuation figures presented in the EE/CA for the cost of maintaining the 30 year O & M. The City believes that $9,600.00 is a gross undervaluation of the actual cost, even in present day dollars, that will be required to maintain the fence at the site, and the cap system. The cost of repairing the fence alone could well exceed this figure, and past vandalism of the fence at the site demonstrates how likely fence repairs and replacements will be. Moreover, there is no contingency built into the figure for accidental releases. Although a release is unlikely, there should be some type of financial assurance that funds will be readily available to clean up a

release. An inflation adjustment should be built into the calculation of the figure to provide a more realistic dollar amount. As an alternative, perhaps some type of pollution liability insurance policy covering the costs of accidental releases should be considered, or income producing investments such as annuities which would provide for growth sufficient to cover contingencies. In addition, to encourage future development of the site, the PRPs should be required to place enough funds into escrow to cover the costs of negotiating and obtaining a Prospective Purchase Agreement between the U.S. EPA and a potential new owner of the site. The requirement of an O & M Agreement could render marketing of this site difficult during the O & M period since prospective buyers would be required to assume legal responsibility for the O & M Agreement until it expires.

Finally, the City asks that the U.S. EPA monitor the site more frequently than every five (5) years as is contemplated under the NCP. At a minimum, the City would like the U.S. EPA to monitor on a semi-annual basis, and report the results of that monitoring to the City's Departments of Public Health and Law. More frequent monitoring may be required if the property remains vacant and the fence falls into disrepair, allowing access to the site.

RESPONSE:

(I) Thirty years is the standard length of operation and maintenance (O&M) agreements at U.S. EPA Superfund sites. In U.S. EPA's judgment, nothing about the site either on its own merits or compared to other U.S. EPA sites, justifies a longer agreement here. This site will have a five year review requirement, during which the site will be periodically evaluated to ensure protection of human health and the environment. Also, given this site's nature, remediation here must include operation and maintenance regardless of the remedy chosen, unless a prospective purchaser agreement addresses specific portions of the site and thereby justifies eliminating operation and maintenance.

(ii) U.S. EPA will consider the City's comment regarding the necessity for a financial assurance mechanism at the site, to cover accidental releases or cost overruns in the future. However, CERCLA gives U.S. EPA no authority to collect funds from responsible parties to pay for future real estate transactions at the site.

(iii) The rationale for the City's request for periodic soil sampling and analysis is unclear, given the potential for such a sampling process to compromise the cap, and for subsequent releases to the environment. The U.S. EPA oppose such sampling, as it would not be protective of human health and the environment.

(iv) The question of whether, at the end of the O&M period, lead will be discovered to be more toxic than currently considered is best answered by the future site-specific decision making process.

(v) The "accidental releases" referred to are unclear; lead is not a volatile contaminant, and the

potential for an implication of "accidental releases" of lead from contaminated soil under a cap is uncertain.

(vi) and (vii) With respect to the semi-annual monitoring and the reporting requirement to the City's Departments of Public Health and Law request. U.S. EPA can require the PRPs to perform semi-annual monitoring when needed. During the design phase of the remedy is when the monitoring requirements is determined more accurately.

COMMENT #5: U.S. EPA UNCONCERNED WITH GROUNDWATER CONTAMINATION

> *The PRPs were required to install groundwater monitoring wells and take ground water samples. Sample results indicated that lead concentrations are as high as 1.35 mg/L and chromium concentrations as high as 1.33 mg/L. These levels are in excess of the federal drinking water standards. However, the U.S. EPA states that since the ground water is not a source of drinking water in the area, no further remedial action must be taken. The NCP, however, requires evaluation of ground water contamination when ground water is a potential source of drinking water. Although ground water in the area of Master Metals in not currently a source of drinking water, there is no guarantee that, in the future, the situation could not change.*
>
> *The City believes additional consideration should be given to the ground water contamination. The PRPs should be required to conduct an evaluation of the impact of ground water contamination on Lake Erie, and the implications thereof under the Great Lakes Water Quality Initiative. Moreover, the EE/CA should address the impact of ground water contamination on documented wells at Standard Oil and Sherwin Williams (depicted in figure 2.7 of the EE/CA). The fact that the total lead in the aquifer has decreased in the past six years suggests that contaminated water is migrating off-site.*
>
> *The City suggests continued on-site monitoring and off-site ground water monitoring to determine whether lead contaminating in the ground water on-site is migrating. Ultimately, remediation may be required.*

RESPONSE:

(I) The rationale for not requiring further ground water monitoring is that on-site ground water monitoring was conducted as part of the EE/CA. The results indicate that the metal concentration levels in ground water appear to be decreasing over time (November 1998 EE/CA Report). The results the City of Cleveland referred to are the levels detected in the 1990 sampling by Master Metals.

(ii) The federal standard for lead referred to is an "action level" standard, requiring specific response actions when 10% of drinking water samples, at the tap are exceeded; strictly speaking, it is not applicable to detections in ground water.

(iii) The focus and intent of the activities at Master Metals is a removal action, this does not discount remediation in the event a complete pathway (potentially contaminated media, i.e. soil, air, water or food chain) is identified. U.S. EPA identified no such pathway for current ground water receptors was identified.

(iv) With reference to the City of Cleveland's contention about ground water as a potential source of drinking water (future receptors). The Master Metals site lies within the "Industrial Valley Area" (ID 98USD013) for which the City requested and obtained an "Urban Setting Designation" (USD) from Ohio EPA's Voluntary Action Program (VAP) pursuant to OAC 3745-300-10(D). While Master Metals alone may not be eligible for VAP status owing to outstanding federal orders, other properties around it may be, depending on the eligibility status of the individual properties. For a site lying within the boundaries of an USD, it is unclear why the City is requesting additional remediation and monitoring based on future potential use. The USD authorizes the use of an alternative clean up standard for ground water remediation based on the urban nature of the area, the availability and widespread use of public drinking water supplies, and the lack of use of the ground water in the area, for drinking purposes. Criteria considered in the review prior to granting the USD included regional water resource needs, existing or potential future uses of ground water, and the potential impact of the USD on surrounding jurisdictions. (Please see Threshold Criteria discussion, #3 and #5, and Additional Criteria discussion, #1 and #2.), see attachment VII.

(v) The U.S. EPA assessed other potential effects of the Master Metals site on the Cuyahoga River and eventually Lake Erie. Overland runoff migration from the site to the Cuyahoga River appears unlikely given the many natural and manmade barriers, and since no streams or ditches lead directly from the site to the Cuyahoga River (November 1998 EE/CA Report). Based on the information available (June 1994 Screening Site Inspection Report), the major impact by the waste water from the site affecting the Cuyahoga River would have been between September 1987 and September 1989. This was due to a pump failure at the Mary Street Pumping Station resulting in waste water bypassing the Cleveland Sewage Treatment Plant and being pumped directly into a combined sewer outfall discharging to the river (North East Ohio Regional Sewer District 1992 report). The situation was corrected, and waste water impacts were longer a concern.

(vi) Based on the information available, ground water flows in a southerly direction below the site. The Standard Oil Company and Sherwin Williams wells referred to in the comment appears to be up gradient of the site, and should not be impacted by any ground water contamination from Master Metals.

COMMENT#6: HOLDEN AVENUE SITE CONTAINS PHYSICAL HAZARDS

Testimony at the public hearing indicated that there may exist physical dangers at the Holden Avenue site that were created as a result of the removal of contaminated soil by the PRPs. A gentleman testified that soil excavation conducted by the PRPs created a

steep slope without any barricades to prevent a person from falling. Such a condition would constitute a nuisance and should be corrected immediately. The City questions whether the PRPs should not be required to hire an engineer to evaluate the stability of the slopes created by the excavation and landfilling which occurred there. Interim measures, i.e. installation of a fence or barrier, may need to be taken immediately to prevent accidents while the situation is being evaluated.

RESPONSE:
Surveys of the Holden Ave. properties show that the PRPs returned the slope to the original condition. A lack of vegetation on the slope may give the impression of a safety hazard. The slope stability at Holden Avenue is not an issue of concern for this proposed plan.

COMMENT# 7: THE US EPA HAS NOT EVALUATED WHETHER ALTERNATIVE #2 VIOLATES ENVIRONMENTAL JUSTICE (EJ) CONCERNS OF THE SURROUNDING COMMUNITY.

Although Master Metals is located in an industrial corridor, its location is only approximately 1/4 mile away from low-income public housing. It does not appear that the U.S. EPA has considered the environmental impact on the residential areas of allowing high levels of lead contamination to remain on the Master Metals site indefinitely. The City maintains that an Environmental Justice analysis should be performed before a final remediation alternative is selected. In conjunction with this evaluation, the U.S. EPA should make an effort to directly solicit comments to the remediation plan from the Department of Housing and Urban Development, and the Cuyahoga Metropolitan Housing Authority (CMHA) which operates the low-income public housing nearby. The City's Health Department would like to work with the U.S. EPA in communicating information concerning the existing site and the health risks posed by lead to the neighboring community. Also, we would like to know how the surrounding community will be notified of future remediation at the site, i.e. through signage, public notice, etc., and whether the PRPs can be required to perform additional testing of nearby playgrounds and residential areas to address concerns of potential migration of lead particles or dust during remediation.

RESPONSE:
(I) The area surrounding the Site meets the Environmental Justice criteria employed by the U.S. EPA Region 5's Superfund Division. The population of one block group located within a one mile radius of the site is 98.86% minority, with low income being 97%. The total population is 525 for this block area. See attachment II, U.S. EPA Region V's, Superfund Environmental Justice Analysis Map for Master Metals Inc., Cleveland Ohio, August 19,1999.

(ii) The U.S. EPA did not make a direct appeal to either agency to provide comments on the cleanup plan. However, the U.S. EPA officials met with Cuyahoga Metropolitan Housing Authority (CMHA) representatives to brief them on the status of the site and to listen to their

concerns. Several CMHA representatives are on the U.S. EPA's mailing list and received the proposed plan for comment. U. S. EPA will make every effort to keep CMHA apprised of the design phase and the clean-up phase.

(iii) The U.S. EPA appreciated the Department's interest in assisting in communication about the site to the community. Someone from the Department can contact U.S. EPA Public Affairs Office, 1-800-621-8431, ask for Bri Bill, the Master Metal's contact person to discuss these efforts. Residents will be kept apprised of site's developments primarily through direct mailings and public information session. Also, the City of Cleveland, through participation in the Toxic Sweep Task Force, is regularly updated on the progress of the Master Metals site. Internal communications between City departments would facilitate transmittal of the requested information to the surrounding community.

(iv) Remediation activities are typically conducted under a Health and Safety Plan (HASP), ensuring both the construction/excavation worker and the off-site population exposures are minimized. The City's concerns regarding the mechanisms to inform the surrounding community about future remediation are noted.

(v) Phased sampling in the EE/CA evaluated potential impacts from the Master Metals site on off-site receptor populations. This sampling did not find off-site contamination above residential risk levels between the site and the nearest residential areas.

(vi) Finally, under the Proposed Plan, risk to all off-site receptor populations from any residual lead contamination at the Master Metals site will be removed, to ensure there are no exposures to off-site populations (including the low-income public housing residents).

COMMENT #8: WRITTEN COMMENTS RECEIVED FROM THE DIRECTOR OF COMMUNITY DEVELOPMENT, CITY OF CLEVELAND

> *The written comments concur with the communication from the City of Cleveland's Law Department and emphasizes the critical need to restore the site to such a condition that it would be suitable for future development.*

RESPONSE:
(I) The issue of reconsolidating of perimeter soil on-site has already been addressed, see response to comment #1 (B)(I).

(ii) As part of the time critical actions, U.S. EPA reviewed treatment technologies (alternative methods) to reduce contaminant mobility and toxicity. The perimeter soil will be treated to RCRA's land disposal restriction levels before being consolidated on-site. U. S. EPA did not evaluate treatment of the slag owing to the slag's similar nature and associated depth issues.

(iii) The U.S. EPA is willing to consider any specific proposals from the City of Cleveland to

facilitate reuse at any time in the design process, including specific proposals on installation of underground utilities corridors in the remedial design stage.

(iv) In response to the comment on restoring the property to productive reuse, remediation of sites is often a phased process. The removal action orders at Master Metals have addressed time critical removals. U.S. EPA is currently addressing non-time critical activities and mitigation of risk to on-property and off-property receptor populations. Presently, no one has submitted concrete redevelopment proposals for U.S. EPA to factor into the Proposed Plan. If and when the legal issues associated with site ownership and redevelopment are addressed, parties may use mechanisms such as prospective purchaser agreements or the Superfund Redevelopment Initiative to facilitate reuse.

COMMENT #9: WRITTEN COMMENTS RECEIVED FROM THE SENIOR VICE PRESIDENT, OPERATION AND ENVIRONMENTAL AFFAIRS, TBN HOLDINGS

> *TBN states that it has been in discussions with a number of parties to determine if the Master Metals site represents a feasible alternative for relocation of the North East Chemical Cleveland facility. For the Master Metals site to represent a feasible alternative, site conditions after clean-up would have to allow for cost effective construction of a treatment, storage and disposal facility. The comments discuss the difficulty of site reuse if contaminated soils are disposed on-site and a geotextile membrane is installed to prevent commingling of contamination, followed by capping. They would be glad to discuss the comments in greater detail as the final plan for the site is prepared.*

RESPONSE:

(I) U.S. EPA would like to facilitate site reuse, the primary responsibility is the protection of human health and the environment. U.S. EPA stated the willingness to factor in specific reuse proposals. To date, other than a general comment (that cost effective construction of building space, a tank farm and areas for truck movement are necessary for reuse of the Master Metals site by North East Chemical), blueprints or other specific plans have not been provided to be factored into the Proposed Plan (in terms of areas where buildings or tank farms will be located, depth of construction activities anticipated, areas where truck movement is anticipated etc.). Without such information and a definite commitment by TBN to reuse the site, the Agencies are not in a position to tailor the Proposed Plan.

(ii) Additionally, remediation at a site is often a phased process. If at a later stage, North East Chemical is definitively able to commit to relocating to the Master Metals site and the legal issues associated with site ownership and redevelopment have been addressed, mechanisms such as prospective purchaser agreements and the Superfund Redevelopment Initiative may to facilitate redevelopment.

COMMENT #10: ORAL COMMENTS MADE DURING MARCH 18, 1999 PUBLIC HEARING

(I) *Comments from the Midwest Railway Historical Foundation: encouraged that the clean-up has gone as far as it has; hopes the area can eventually be turned into a railroad museum for the City of Cleveland and the Tremont neighborhood:*

RESPONSE:
Mechanisms such as prospective purchaser agreements (PPA), and the Superfund Redevelopment Initiative may facilitate redevelopment.

(ii) I think the chosen alternative is the one to go with. I think there's two weaknesses and I would like to see a plan for actually addressing those in the future. One is the maintenance. It's not sufficient currently and I think that there's enough interest in this neighborhood that we could detail something. And the second is the future use. I understand the regulatory scheme that we all are working under but I think there's also interest in the neighborhood to help actually figure out a logical clean-up and a logical future use.

RESPONSE:
Future site maintenance will be addressed under the Operations and Maintenance Agreement. Future site use will depend on the interested parties. To facilitate site re-use, the most severely deteriorated portions of the property will be covered with the geotextile barrier and clean soil. The areas not covered with the clean soil cover, will be sealed with asphalt, concrete or a concrete sealer. The U.S. EPA extended the public comment period to two months. U.S. EPA announced the comment period extension in local newspapers. U.S. EPA granted this extension to provide additional time for anyone wanting to make recommendations for any other clean-up methodology.

(iii) I would like to strongly encourage the continued communication between those representatives and U.S. EPA and the State of Ohio EPA as it's pertinent, because I imagine it will be through those representatives that we find out exactly what's going to be happening on a daily, weekly basis until that final decision is made.

RESPONSE:
The Agencies have been communicating with the City and will continue to do so. Bri Bill is the U.S. EPA Community Involvement Coordinator for the Master Metals site. She can be reached at (312)353-6646, or toll free at (800)621-8431, or by e-mail: **bill.briana@epa.gov.** Her mailing address is: U.S. EPA, 77 West Jackson Blvd., (P-19J), Chicago, IL 60604-3590. She would assist the residents in locating other Federal and State staff involved in the cleanup. Fact sheets about the site's progress will be mailed periodically and will also contain the names of people to contact.

(iv) I would like to comment and suggest that we look at alternative, what I suggest as an alternative number 5 where you do actually remediate the soil and leave it as a grass and clay cover and then a grass top. (ii) You have an opportunity to go after 50 companies which, if you look through this list, an extra $50,000 is a drop in the bucket to them. The additional cost could easily be covered by these companies, so I would encourage that you remediate it to the extent that you possibly can clean the soil and leave it as a grass cap.

RESPONSE:
If the excavated perimeter soils is hazardous, (fails total concentration leachate procedure), the excavated soils will be treated. After treatment, the soil is solid waste, and must be handled appropriately, either removed from the site or contained. The excavated perimeter soil will be replace with clean soil and revegetated. Removal of material and remediation of the underlying soil and slag "on site" is not an appropriate clean up remedy for this site.

(v) The only comment I would like to make is that I would like to ask the EPA to look at the PRP list again in terms of soliciting more funds for a complete and total clean-up of this site. I know that the community would support you in pursuing the added revenue that it would take to make sure that the dirt was completely clean and that we weren't refilling it with bad stuff. (ii) The other comment I would like to make is to take the offer and put it on the table that there would be monthly reports to the block club over this period of 30 years that you are doing this, whichever lasts longer, to ensure that their reporting continually occur. If I could ask that, it would be the Director of Public Health for the City of Cleveland.

RESPONSE:
(I) As section four of the EE/CA outlines, U.S. EPA considers cost-effectiveness in selecting a remedy. This is because CERCLA, as well as CERCLA's National Contingency Plan, 40 C.F.R. Part 300, require U.S. EPA to consider cost-effectiveness in selecting a remedy. To the extent that U.S. EPA ignores cost-effectiveness in selecting a remedy, U.S. EPA will have difficulty recovering clean up costs from responsible parties in future litigation for cost recovery. Unfortunately, community support would assist U.S. EPA little in such litigation. This is because cost recovery litigation would instead focus on the extent to which U.S. EPA relied on its own interpretive policies and guidance in selecting and carrying out the disputed remedy.

(ii) The statement regarding updates to the block club from the Director of Public Health for the City of Cleveland is out of the jurisdiction of the U.S. EPA; it is more of an issue for the City of Cleveland.

COMMENT# 11: WRITTEN COMMENTS MADE DURING MARCH 18, 1999 PUBLIC HEARING

(I) I believe the alternatives for clean-up are complex and the comment period of one

month is too short for (the) community to obtain adequate information to give their opinion.

RESPONSE:
For non-time critical removal actions, the National Contingency Plan (NCP), at 40 C.F.R. §300.415(m), requires a 30-day public comment period on the EE/CA and any supporting documentation. 40 C.F.R.§300.415(m)(4)(iii), requires an extension to the comment period of a minimum of 15 additional days upon U.S. EPA's receipt of a request for an extension. U.S. EPA extended the public comment period to two months. U.S. EPA announced the comment period extension in local newspapers. U.S. EPA granted this extension to provide additional time for anyone wanting to make recommendations for any other clean-up methodology.

(ii) Has EPA had significant experience with the two caps, (clay vs asphalt)? If so, they should provide information on the experience, effectiveness of the two caps at other superfund sites.

RESPONSE:
U.S. EPA have the most experience using the clay cap versus the asphalt cap. Presently, there are two Superfund sites using asphalt caps as part of the remediation remedy as a pilot study through the U.S. EPA Superfund Innovative Technology Evaluation (SITE) Program. This program is responsible for evaluating innovative technologies performance, cost and utility at contaminated sites. Dover Air Force Base, Delaware, and Tri-County Landfill, Elgin, IL, are the two Superfund sites where asphalt caps are being used. Regulatory requirements state that the remedy must:

- be protective of human health and the environment

- attain the ground-water protection standard, 40 C.F.R.§258.55(h)

-control the source of release to reduce or eliminate, further release, 40 C.F.R. Part 258, Appendix II

- comply with standards for management of waste, 40 C.F.R.§258.58(d)

Although both the clay and asphalt cap will accomplish the regulatory requirements, the U.S. EPA evaluated the alternatives against the three evaluation criteria for selecting a remedy:

- effectiveness

- implementablility

- cost

After this evaluation, U.S. EPA selected the proposed action. For more information on different types of caps, please visit the following website address: http://esrf.org/pdf/brCapping.htm select Section 10: *Still in quest for the perfect cap,* Glendon W. Gee and Anderson L. Ward.

END OF RESPONSIVENESS SUMMARY 9/23/99

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ATTACHMENT XI

U.S. ENVIRONMENTAL PROTECTION AGENCY

ADMINISTRATIVE RECORD
FOR
MASTER METALS
CLEVELAND, CUYAHOGA COUNTY, OHIO

ORIGINAL
SEPTEMBER 15, 1999

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	00/00/00	U.S. EPA	File	Site Background Information and Reasons for Additional Response Action at the Master Metals Site	4
2	00/00/00	U.S. EPA	File	Table/Map re: Samples And Analytical results for the Holman Avenue Site	2
3	00/00/00	Technical Review Workgroup for Lead	Distribution List	Report re: Methodology for Assessing Risks Associated with Non-Residential Adult Exposure to Lead in Soil	39
4	01/21/91	Compliance Technologies, Inc.		Subsurface Investigation Report for the Master Metals Site	119
5	08/13/92	Ecology and Environment, Inc.	U.S. EPA	Site Assessment Report for the Master Metals, Inc. Site	66
6	01/21/93	Environment One, Inc.		Report: Master Metals Background Sampling Results for the Holmden Avenue Property	11
7	04/27/93	Gaitskill, J., U.S. EPA	Fabinski, L., U.S. EPA	Memorandum re: Ambient Lead Concentrations near the Master Metals Site	4
8	05/10/93	Shelley, T., Ohio Dept. of Health	Ballard, T., U.S. EPA	Letter re: Health Consultation for the Master Metals Site	1
9	05/13/93	Muroya, M., USDHHS/PHS/ ATSDR	Ballard, T., U.S. EPA	Letter re: Directions of the Apartment Complex and Playground in the Health Consultation for the Master Metals Site	1
10	08/05/93	Schregardus, D., Ohio EPA	Mickey, D., Master Metals, Inc.	Letter re: Violations of the October 14, 1992 Final Findings and Orders Issued to Master Metals, Inc.	2

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
11	09/24/93	Ecology and Environment, Inc.	U.S. EPA	Site Assessment Report for the Master Metals Site	13
12	01/00/94	U.S. EPA/ EMSL	U.S. EPA	Aerial Photographic Analysis of Master Metals, Inc. Site (TS-PIC-93069/94069)	22
13	06/30/94	PRC Environmental Management, Inc.	U.S. EPA	Screening Site Inspection/Site Evaluation Report for the Master Metals Site	46
14	01/00/96	Conti, M., U.S. EPA	U.S. EPA	Report: Lead Monitoring Study Around Master Metals, Inc. and LTV Steel Company	29
15	03/26/97	Van Leeuwen, P., U.S. EPA	Harris, A., U.S. EPA	Memorandum re: Lead Risk Evaluation for the Master Metals Site	24
16	04/02/97	Van Leeuwen, P., U.S. EPA	Harris, A., U.S. EPA	Memorandum re: Lead Risk Evaluation for the Master Metals Site	25
17	04/17/97	U.S. EPA	Respondents	Administrative Order by Consent for the Master Metals Site w/ Attached Cover Letter	32
18	04/18/97	ENTACT, Inc.	U.S. EPA	Site Investigation for Master Metals and the Holmden Road Site	22
19	05/13/97	ENTACT, Inc.	U.S. EPA	Phase I Time-Critical Removal Action Workplan for the Master Metals Site	87
20	05/13/97	ENTACT, Inc.	U.S. EPA	Phase I Time-Critical Removal Action Workplan Book 2 (Appendices B & C)	209
21	06/30/97	U.S. EPA	File	Table: Waste Characterization and Verification Analysis for the Master Metals Site for the Period June 19-30, 1997	4
22	07/15/97	U.S. EPA	File	Table: Air Monitoring Data for the Master Metals Site for the Period June 16-July 15, 1997	2

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
23	07/18/97	Kissick, E., ENTACT, Inc.	Alcamo, T., U.S. EPA	Letter re: PM10 Air Sampling Data for the Master Metals Site	2
24	08/06/97	U.S. EPA/ Region 3	U.S. EPA	Table: U.S. EPA Region 3 Risk-Based Concentrations	16
25	08/08/97	ENTACT, Inc.	U.S. EPA	Engineering Evaluation and Cost Analysis (EE/CA) Workplan for the Master Metals Site	174
26	09/02/97	ENTACT, Inc.	Master Metals Technical Committee	Treatability Study Report for the Master Metals Site	12
27	09/04/97	U.S. EPA	File	Table: Waste Characterization and Verification Analysis for the Master Metals Site for the Period August 8-September 4, 1997	4
28	09/09/97	U.S. EPA	File	Table: Air Monitoring Data for the Master Metals Site for the Period August 11-September 9, 1997	2
29	09/16/97	Trocchio, J., Ohio EPA	Alcamo, T., U.S. EPA	Letter re: Ohio EPA's Comments on the EE/CA Workplan for the Master Metals Site	1
30	09/18/97	Alcamo, T., U.S. EPA	Pisani, D., ENTACT, Inc.	Letter re: U.S. EPA's Comments on the EE/CA Workplan for the Master Metals Site	2
31	10/01/97	ENTACT, Inc.	U.S. EPA	Engineering Evaluation and Cost Analysis (EE/CA) Sampling Plan for the Master Metals Site	100
32	10/08/97	DeRosa, M., ENTACT, Inc.	Alcamo, T., U.S. EPA	Letter re: Request for Field Modification to Phase I Time-Critical Removal Work Plan for the Master Metals Site	4
33	10/09/97	DeRosa, M., ENTACT, Inc.	Alcamo, T., U.S. EPA	Fax Transmission re: Field Modification to Phase I Time-Critical Removal Work Plan for the Master Metals Site	8

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
34	10/10/97	ENTACT, Inc.	U.S. EPA	Summary of Pertinent Analytical Results for Samples Taken Between September 10 - October 10, 1997 for the Master Metals Site	8
35	10/15/97	Pisani, E., et al.; ENTACT, Inc.	Alcamo, T., U.S. EPA	FAX Transmission re: Plan of Remedial Activities for the Holmden Avenue Property	4
36	10/24/97	ENTACT, Inc.	U.S. EPA	Tables: Summary of Pertinent Analytical Results for the Master Metals Site for the Period October 13-24, 1997	3
37	10/27/97	DeRosa, M., ENTACT, Inc.	Alcamo, T., U.S. EPA	FAX Transmission re: Analytical Results for Samples Taken South of the Master Metals Site	9
38	11/03/97	Abraham, S., Ohio EPA	DeRosa, M., ENTACT, Inc.	Letter re: Analytical Data on the Backfill Source at the Master Metals Site	1
39	11/17/97	Entact, Inc.	Alcamo, T., U.S. EPA	FAX Transmission re: Weekly Summaries for Weeks 19-23 (October 13-November 16, 1997) for the Master Metals Site	6
40	11/21/97	Ross Analytical Services, Inc.	U.S. EPA	Fax Transmissions Forwarding (1) Analytical Data for Excavated Soil at the Master Metals Site and (2) Verification Results for Holmden Avenue Property	3
41	12/16/97	Banks, S., ENTACT, Inc.	Harris, A., U.S. EPA	Fax Transmission Forwarding Analytical Data for the Master Metals Site	12
42	01/19/98	ENTACT, Inc.	U.S. EPA	Engineering Evaluation and Cost Analysis (EE/CA) Data Report for the Master Metals Site	118
43	02/06/98	ENTACT, Inc.	U.S. EPA/ Ohio EPA	Final Report for Removal Activities at the Holmden Avenue Site	162
44	02/09/98	Abraham, S., Ohio EPA	DeRosa, M., ENTACT, Inc.	Letter re: Ohio EPA's Comments on the EE/CA Data Report for the Master Metals Site	2

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
45	02/19/98	Zahorodnij, O., City of Cleveland Fire Department	Winklhofer, R., U.S. EPA	FAX Transmission re: Information Concerning Underground Storage Tanks at the Master Metals Site	4
46	03/09/98	Abraham, S., Ohio EPA	Harris, A., U.S. EPA	Letter re: Ohio EPA's Comments on the Final Report for Removal Activities at the Holmden Avenue Property	1
47	04/03/98	Abraham, S., Ohio EPA	Harris, A., U.S. EPA	Letter re: Ohio EPA's Comments on the Phase I Final Report for Time Critical Removal Action at the Master Metals Site	2
48	04/24/98	ENTACT, Inc.	U.S. EPA	Final Report for the Phase I Time-Critical Removal Action Activities at the Master Metals Site	74
49	05/06/98	Ord, V., Ohio Department of Commerce	Cisneros, A., U.S. EPA	Letter re: Removal of Underground Storage Tanks at the Former Master Metals Site	2
50	05/29/98	Abraham, S., Ohio EPA	Harris, A., U.S. EPA	Letter re: Ohio EPA's Comments on the EE/CA Report for the Master Metals Site	7
51	05/29/98	Dodrill, J., City of Cleveland	Abraham, S., Ohio EPA	Letter re: City of Cleveland's Comments to Proposed Remediation at Master Metals Site and Holden Avenue	5
52	06/02/98	Abraham, S., Ohio EPA	Dodrill, J., City of Cleveland	Letter re: Ohio EPA's Responses to the City of Cleveland's May 29, 1998 Comments on the EE/CA Report for the Master Metals Site and the Holmden Avenue Remediation	4
53	06/05/98	Abraham, S., Ohio EPA	Harris, A., U.S. EPA	Letter re: Ohio EPA's Review of the Revised Phase I Final Report for the Time Critical Removal Action at the Master Metals Site	
54	11/23/98	ENTACT, Inc.	U.S. EPA	Final Engineering Evaluation and Cost Analysis (EE/CA)for the Master Metals Site	84

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
55	12/03/98	Abraham, S., Ohio EPA	Heath, J., U.S. EPA	Letter re: Ohio EPA's Comments on the EE/CA Report for the Master Metals Site	1
56	02/18/99	*Cleveland Plain Dealer*	Public	U.S. EPA Public Notice re: Announcement of the Public Comment Period on the EE/CA for Cleanup of Lead Contaminated Soil at the Master Metals Site and the March 18, 1999 Public Meeting	1
57	02/23/99	*Cleveland Plain Dealer*	Public	U.S. EPA Public Notice re: Announcement of the Public Comment Period on the EE/CA for Cleanup of Lead Contaminated Soil at the Master Metals Site and the March 18, 1999 Public Meeting	1
58	03/00/99	U.S. EPA	Public	Fact Sheet: U.S. EPA Proposes Clean-up Plan for Master Metals Site	10
59	03/02/99	U.S. EPA	Public	Environmental News Release: Proposed Clean-up Plan for the Master Metals Site and Announcement of the Public Comment Period and the March 18, 1999 Public Meeting	2
60	03/18/99	Concerned Citizens	U.S. EPA	Three Public Comment Sheets re: the Proposed Cleanup Plan for the Master Metals Site	3
61	03/18/99	U.S. EPA/ Ohio EPA	Public	Transcript of March 18, 1999 Public Meeting re: the Master Metals Site	89
62	03/31/99	*Cleveland Plain Dealer*	Public	U.S. EPA Public Notice re: Announcement of an Extension to the Public Comment Period on the EE/CA at the Master Metals Site	1
63	03/31/99	Kulinski, C., TBN Holdings	Heath, J., U.S. EPA	Letter re: TBN's Request for an Extension to the Public Comment Period on the Proposed Cleanup Plan for the Master Metals Site	1

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
64	03/31/99	U.S. EPA	Public	Environmental News Release: EPA Extends Comment Period for the Master Metals Cleanup Plan	2
65	04/00/99	Roy F. Weston, Inc.	U.S. EPA	Final Community Involvement Plan for the Masters Metal Site	146
66	04/29/99	Dodrill, J., City of Cleveland/ Department of Law	Bill, B., U.S. EPA	Letter re: City of Cleveland's Comments on the EE/CA for the Master Metals Site	13
67	04/29/99	Hudecek, L., City of Cleveland/ Department of Community Development	Bill, B., U.S. EPA	Letter re: City of Cleveland's Comments on the EE/CA for the Master Metals Site	2
68	04/29/99	Kulinski, C., TBN Holdings	Bill, B. & G. Massenburg; U.S. EPA	Letter re: TBN's Comments on the Proposed Plan for Cleanup at the Master Metals Site	2
69	04/30/99	Kulinski, C., TBN Holdings	Bill, B. & G. Massenburg; U.S. EPA	Letter re: TBN's Submission of Comments on the Proposed Cleanup Plan for the Master Metals Site	1
70	05/06/99	Jones, C., Ohio EPA	Rish, W., McLaren Hart, Inc.	Letter re: Ohio EPA's Approval of the City of Cleveland's Request for an Urban Setting Designation (USD) for the "Industrial Valley Area" within the City of Cleveland	8
71	08/19/99	U.S. EPA	File	Region 5 Superfund EJ Analysis for the Master Metals Site	1
72	00/00/00	Massenburg, G., U.S. EPA	Muno, W., U.S. EPA	Action Memorandum Request for a Non-Time Critical CERCLA Removal Action at the Master Metals Site (PENDING)	

GUIDANCE ADDENDUM

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	12/00/90	U.S. EPA/ OSWER	U.S. EPA	Superfund Removal Procedures Action Memorandum Guidance(EPA 540/P-90/004)	65
2	08/00/93	U.S. EPA/ OERR	U.S. EPA	Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA (EPA 540-R-93-057, Publication 9360.0-32, PB93-963502)	65
3	07/14/94	U.S. EPA/ OSWER	U.S. EPA	Memorandum re: Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities (OSWER Directive 9355. 4-12)	25
4	12/00/96	U.S. EPA/ Technical Workgroup for Lead	U.S. EPA	Report: Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil	48
5	08/00/98	U.S. EPA/ OSWER	U.S. EPA	Clarification to the 1994 Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities (EPA 540-F-98-030; PB98-963244)	16

THE FOLLOWING GUIDANCE DOCUMENTS ARE INCORPORATED BY REFERENCE INTO THE ADMINISTRATIVE RECORD

DOCUMENTS MAY BE VIEWED AT U.S. EPA REGION 5

1	03/00/89	U.S. EPA/ OERR	U.S. EPA	Risk Assessment Guidance for Superfund, Volume II: Evaluation.Manual [INTERIM FINAL] (EPA 540/1-89/001)
2	08/00/89	U.S. EPA/ OSWER	U.S. EPA	CERCLA Compliance with Other Laws Manual, Part II: Clean Air Act and Other Environmental Statutes and State Requirements (OSWER Directive 9234.1-02, EPA 540/G-89/009)
3	12/00/89	U.S. EPA/ OERR	U.S. EPA	Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual, Part A INTERIM FINAL] (EPA 540/1-89/002)

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION
4	04/00/90	U.S. EPA/ OERR	U.S. EPA	Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties [INTERIM FINAL] (EPA 540/G-90/001)
5	05/00/90	U.S. EPA/ OSWER	U.S. EPA	Quick Reference Fact Sheet: A Guide to Developing Superfund Records of Decision (OSWER Directive 9335.3-02FS-1)
6	08/00/90	U.S. EPA/ OERR	U.S. EPA	Guidance on Expediting Remedial Design and Remedial Action(EPA 540/G -90/006)
7	09/00/90	U.S. EPA/ OSWER	U.S. EPA	Quick Reference Fact Sheet: Streamlining the RI/FS for CERCLA Municipal Landfill Sites (OSWER Directive 9355.3-11FS)
8	11/00/90	U.S. EPA/ OSWER/ORD	U.S. EPA	The Superfund Innovative Technology Evaluation Program: Technology Profiles (EPA 540/5-90/006)
9	02/00/91	U.S. EPA/ OERR	U.S. EPA	Conducting Remedial Investigations/Feasibility Studies for CERCLA Municipal Landfill Sites(EPA 540/P -91/001)
10	06/00/92	U.S. EPA/ OERR	U.S. EPA	Standard Operating Safety Guidelines(Publication 9285.1-03, PB 92-963414
11	11/00/92	U.S. EPA/ OSWER	U.S. EPA	Intermittent Bulletin (Vol. 1, No.4): The Superfund Accelerated Cleanup Model [SACM] (Publication 9203.1-021)
12	12/00/92	U.S. EPA/ OSWER	U.S. EPA	Intermittent Bulletin (Vol. 1, No.1): Status of Key SACM Program Manaement Issues, Interim Guidance (Publication 9203.1-051)
13	12/00/92	U.S. EPA/ OSWER	U.S. EPA	Intermittent Bulletin (Vol. 1, No.2): Early Action and Long Term Action Under SACM, Interim Guidance (Publication 9203.1-051)
14	12/00/92	U.S. EPA/ OSWER	U.S. EPA	Intermittent Bulletin (Vol. 1, No.3): Enforcement Under SACM Interim Guidance (Publication 9203.1-051)

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION
15	12/00/92	U.S. EPA/ OSWER	U.S. EPA	Intermittent Bulletin (Vol. 1, No.4): Assessing Sites Under SACM, Interim Guidance (Publication 9203.1-051)
16	05/00/93	U.S. EPA/ OERR	U.S. EPA	Guidance for Scoping the Remedial Design [DRAFT] (OSWER Directive 9355.0-43, EPA 540-F-93-026, PB 93-963332)
17	08/00/93	U.S. EPA/ OSWER	U.S. EPA	Guidance on Conducting Non Time Critical Removal Actions Under CERCLA (OSWER Directive 9360.0-32, EPA 540-R-93-057, PB 93-963402)
18	09/00/93	U.S. EPA/ OSWER	U.S. EPA	Guidance for Evaluating the Technical Impracticability of Ground Water Restoration [INTERIM FINAL](OSWER DIRECTIVE 9234.2-25)
19	09/00/93	U.S. EPA/ OSWER	U.S. EPA	Quick Reference Fact Sheet: Draft Soil Screening Level Guidance
20	09/00/93	U.S. EPA/ OSWER	U.S. EPA	Quick Reference Fact Sheet: Presumptive Remedies, Policies and Procedures (OSWER Directive 9355.0-47FS, EPA 540-F-93-047, PB 93-963345)
21	09/00/93	U.S. EPA/ OSWER	U.S. EPA	Quick Reference Fact Sheet: Presumptive Remedies for CERCLA, Municipal Landfill Sites (OSWER Directive 9355.0-49FS, EPA 540-F-93-035, PB 93-963339)
22	09/00/93	U.S. EPA/ Region 5	U.S. EPA	Superfund Accelerated Cleanup Model: U.S. EPA Region 5 Process (Vol. 1, No. 1)
23	10/00/93	U.S. EPA/ Region 5/	U.S. EPA	Superfund Accelerated Cleanup Model: Region 5 Integrated Assessments (Vol.1, No. 3)
24	10/00/93	U.S. EPA/ Region 5	U.S. EPA	Superfund Accelerated Cleanup Model: Region 5 Qualitative Ecological Risk Assessments (Vol.1, No. 4)
25	10/00/93	U.S. EPA/	U.S. EPA	Superfund Accelerated Cleanup Model: Region 5 Regional Decision Team (Vol. 1, No.2)